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TECHNICAL MEMORANDUM SUMMARY OF FINDINGS FOR BUILDING 177 WASTE
MATERIAL INSPECTION CNC CHARLESTON SC
8/27/2013
RESOLUTION CONSULTANTS



Technical Memorandum

Date: August 27, 2013
To: Mr. Art Sanford, BRAC Southeast
From: Mr. Shawn Dolan, P.G., Resolution Consultants –Project Manager
Subject: Summary of Findings – Building 177 Waste Material Inspection
Former Charleston Naval Shipyard

At the request of BRAC Southeast, Mr. Shawn Dolan, Resolution Consultants conducted a site visit of the subject building on August 7, 2013. The purpose of the site visit was to visually inspect and photograph waste materials previously identified by the current building owner and determine if the materials were related to previous Navy activities. A list of the materials previously identified by the current building owner is provided as Attachment A. A photographic log is provided as Attachment B.

To conduct the site visit, Resolution Consultants personnel (Shawn Dolan) met with Mr. Joe Yantorn, Operations Manager/Safety Manager at Marine, Repair, and Maintenance, Inc. and Mr. Mike Marshall, Safety Manager, Detyens Shipyard. Mr. Yantorn and Mr. Marshall escorted Mr. Dolan to a 2nd floor laboratory room inside Building 177 where the majority of the waste material was located. Waste material containers were photographed along with any identifying labels and shipping information which could be used to determine the previous owner of the wastes. As several waste containers were in an unstable condition, none of the containers were moved or handled during the inspection.

Ownership/User Information

Ownership/user information for the wastes observed during the inspection of the laboratory room was limited and included the following:

- Several sample bottles dated December 1997 and labeled “Detyens”. These sample bottles each contain what appears to be oil (Photos 1 and 2, Attachment B).
- A FedEx envelope, dated April 1998, delivered to “Applied Technical Services, 1865 Avenue B North, Building 177” (Photo 3, Attachment B).
- A mercury vault, approximately 2ft x 2ft x 2ft, labeled “Use approved by NAVSEA” (Photos 4 through 6, Attachment B).
- Additional ownership/user information was noted in a photo provided by Dentyens personnel. A 30 gallon container of Fryquel, located on the 4th floor, was labeled “Applied Technical Services, Inc., Cross County Road, N. Charleston, SC 29418” (Photos 28 and 29, Attachment B).

Condition of Materials

Resolution Consultants visual inspection of Building 177 was limited to the wastes located in the Laboratory room on the 2nd floor and a storage room containing 5 pallets of stacked 30 gallon

containers, also located on the 2nd floor. The wastes located on the 4th floor of the building were not observed; however, photographs of the material on the 4th floor were provided to Resolution Consultants by Detyens personnel and are also included in Attachment B. The following observations were made during the visual inspection:

- A corrosive locker, approximately 4ft x 3ft x 2ft, located in the 2nd floor laboratory contained numerous containers in what appears to be unstable condition (Photos 7 through 17, Attachment B). Chemical identifying labels were visible on each container, however, there was no recipient information on the containers so ownership of the wastes could not be determined.
- Various chemicals were observed on a laboratory bench adjacent to the corrosive locker in the 2nd floor laboratory (Photos 18 through 21, Attachment B). Identifying labels were visible on each container, however, there was no recipient information on the containers so ownership of the wastes could not be determined.
- A 5-gallon drum labeled “Petroleum Ether” was observed in the laboratory, in which the contents apparently have leaked from the drum. The drum had no recipient information on the containers so ownership of the wastes could not be determined (Photos 22 and 23, Attachment B).
- The 30 gallon containers located in the storage room on the 2nd floor appear to be empty. Detyens personnel indicated that they would conduct a more thorough inventory of these waste containers and report back to the Navy. However, these 30 gallon containers are similar to the container of Fryquel, located on the 4th floor and are not likely the former property of the Navy (Photos 24 through 26, Attachment B).

As previously stated, Resolution Consultants did not visually inspect the material located on the 4th floor, but photographs of the material were provided (Photos 27 through 30, Attachment B). Aside from the labeled Fryquel drum previously mentioned, there was no recipient information provided in the photos.

If you have any additional questions regarding this Technical Memorandum, please contact Shawn Dolan at (843) 740-7356 or via email at shawn.dolan@aecom.com.



Attachment A - Waste Inventory

Building 177 Chemicals

2nd Floor

1. 55 gallon drum of ZEP
2. (50) 30 gallon drums of Phosphate Ester / Fyrquel 150 / Waste Oil. Some may be empty.
3. Mercury
4. Hydrochloric Acid
5. Sodium Dichromate
6. Copper Sulphate
7. Sodium Hydroxide
8. Sodium Pyrophosphate
9. Sodium Carbonate
10. Sulfuric Acid
11. Hydrofluoric Acid
12. Hydranal Solvent
13. Nitric Acid
14. Methyl Alcohol
15. (2) 5 gal buckets of Petroleum Ether (1 leaking)

4th Floor

1. Pallet of (8) 5 gal buckets of Antifreeze / Guildline / Acrylic Lacquer Thinner / Morlina Oil SD 150.
2. (2) 30 gal drums of Fyrquel 150 (Leaking)



Attachment B - Site Photos

Photo Number:

1

Description:

Sample bottles left on table in lab, dated December 1997 and labeled "DETYENS". Close up view of label is provided in Photo 2 (below).

Does not appear to be related to Navy activities.



Photo Number:

2

Description:

Sample bottle labeled "DETYENS"

Does not appear to be related to Navy activities.

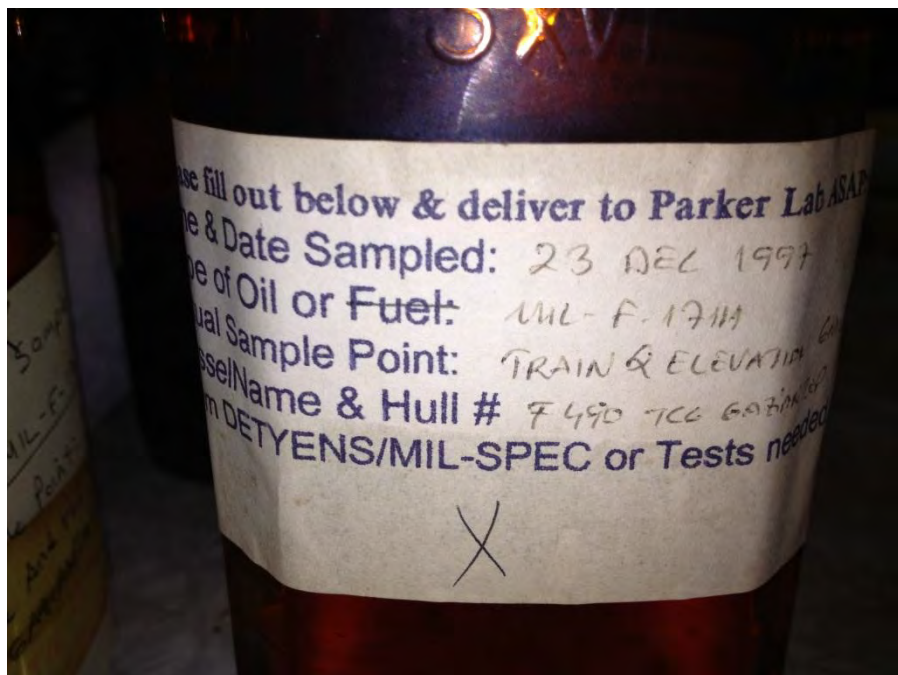


Photo Number:

3

Description:

FedEx Pack, dated April 1998, found in lab room in Building 177, 2ND floor.

Recipient is "Applied Technical Services, 1865 Avenue B North, Building 177"

This label indicates that **the most recent use of the lab room was potentially not related to Navy activities.**

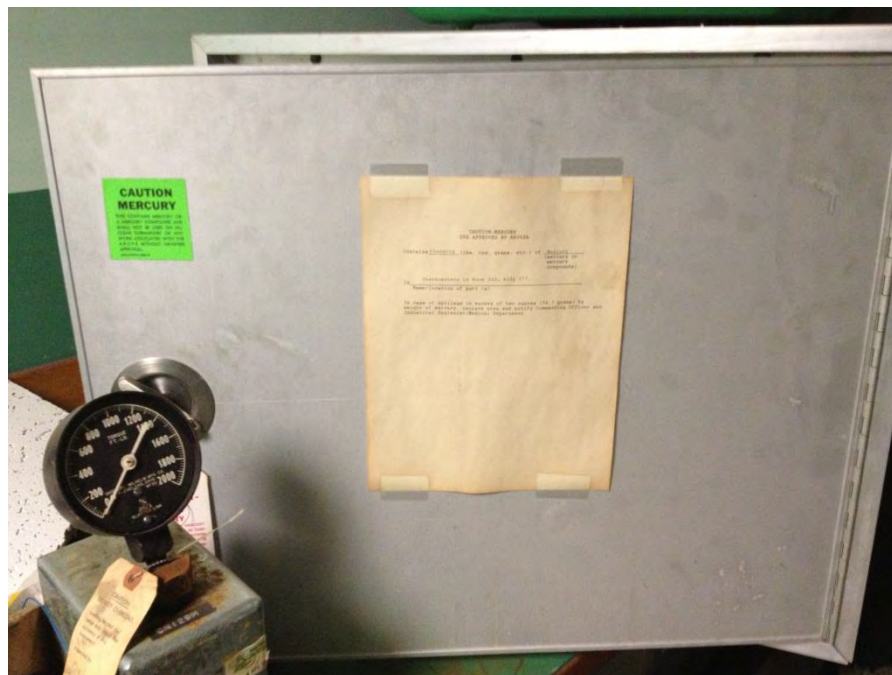


Photo Number:

4

Description:

Mercury vault.

Label reads,
"CAUTION
MERCURY."2nd Floor lab room.Based on the label
shown in photo
number 5 (below),
this container
**appears to be
related to Navy
activities.**However, it is not
known whether
any material
remains inside the
container.**Photo Number:**

5

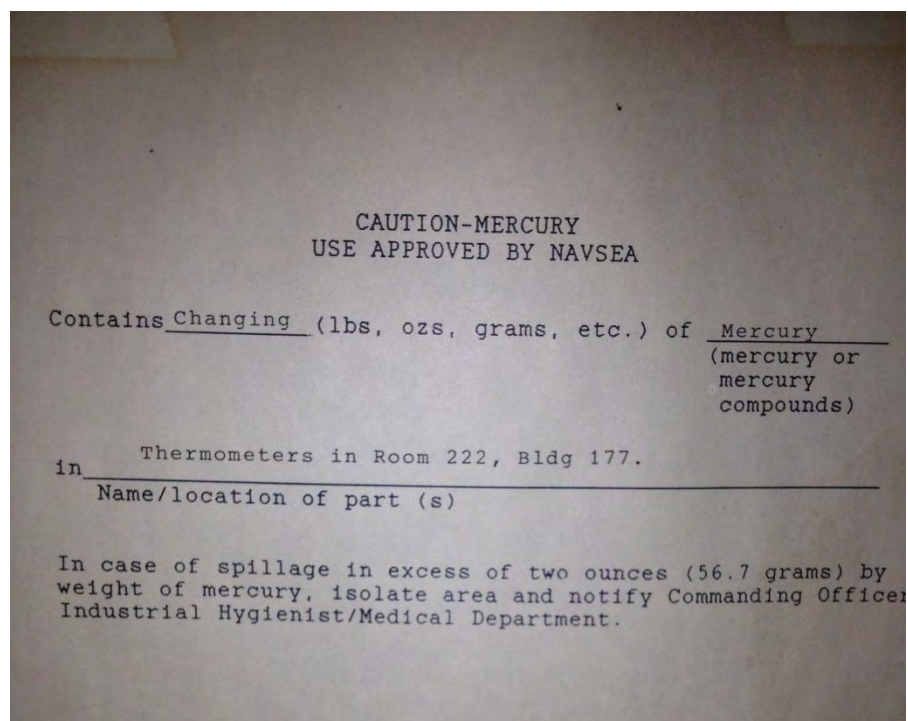
Description:Notice posted on
mercury vault.2nd Floor lab room.

Photo Number:

6

Description:

Inside of Mercury vault.

Drawers labeled
"Storage of
Mercury bearing
instruments".

2nd Floor lab room.



Photo Number:

7

Description:

2nd Floor lab room
- Corrosive storage cabinet.

Photos 16 through 26 contain images of the chemicals observed in the Corrosive storage cabinet in the 2nd floor lab room.

There are no shipper markings on this container; therefore, it is **undetermined whether this material is related to Navy activities.**



Photo Number:

8

Description:

Chemicals stored in cabinet, including Hydrochloric Acid, Sodium Hydroxide, and Sodium Pyrophosphate.

2nd Floor lab room
- Corrosive storage cabinet

There are no shipper markings on this container; therefore, it is **undetermined whether this material is related to Navy activities.**



Photo Number:

9

Description:

Chemicals stored in cabinet, including Sulfuric Acid.

2nd Floor lab room
- Corrosive storage cabinet

There are no shipper markings on this container; therefore, it is **undetermined whether this material is related to Navy activities.**



Photo Number:

10

Description:

Chemicals stored in cabinet, including Hydrofluoric Acid and Hydranal® Solvent.

2nd Floor lab room
- Corrosive storage cabinet

There are no shipper markings on this container; therefore, it is **undetermined whether this material is related to Navy activities.**



Photo Number:

11

Description:

Crystallized
Hydrochloric Acid.

2nd Floor lab room
- Corrosive storage
cabinet

There are no
shipper markings
on this container;
therefore, it is
**undetermined
whether this
material is related
to Navy activities.**



Photo Number:

12

Description:

Chemicals stored
in cabinet,
including Sodium
Dichromate and
Copper Sulphate.

2nd Floor lab room
- Corrosive storage
cabinet

There are no
shipper markings
on this container;
therefore, it is
**undetermined
whether this
material is related
to Navy activities.**



Photo Number:

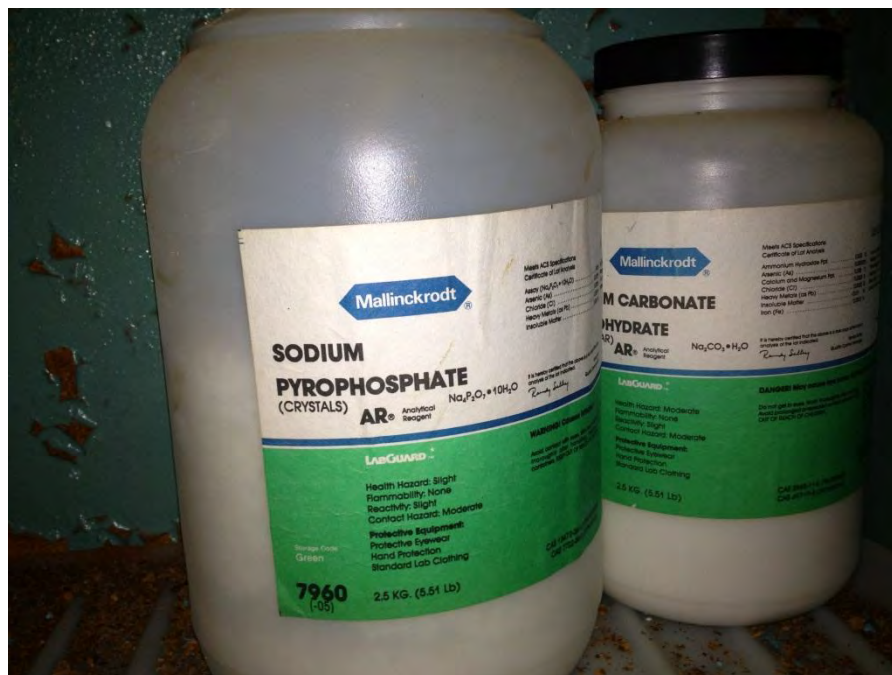
13

Description:

Sodium Phosphate crystals and Sodium Carbonate Hydrate.

2nd Floor lab room
- Corrosive storage cabinet

There are no shipper markings on this container; therefore, it is **undetermined whether this material is related to Navy activities.**

**Photo Number:**

14

Description:

Sulfuric Acid.

2nd Floor lab room
- Corrosive storage cabinet

There are no shipper markings on this container; therefore, it is **undetermined whether this material is related to Navy activities.**



Photo Number:

15

Description:

Chemicals stored in cabinet, including Hydrofluoric Acid and a Nitric Acid mixture.

2nd Floor lab room
- Corrosive storage cabinet

There are no shipper markings on this container; therefore, it is **undetermined whether this material is related to Navy activities.**

**Photo Number:**

16

Description:

Hydranal® Solvent.

2nd Floor lab room
- Corrosive storage cabinet

There are no shipper markings on this container; therefore, it is **undetermined whether this material is related to Navy activities.**

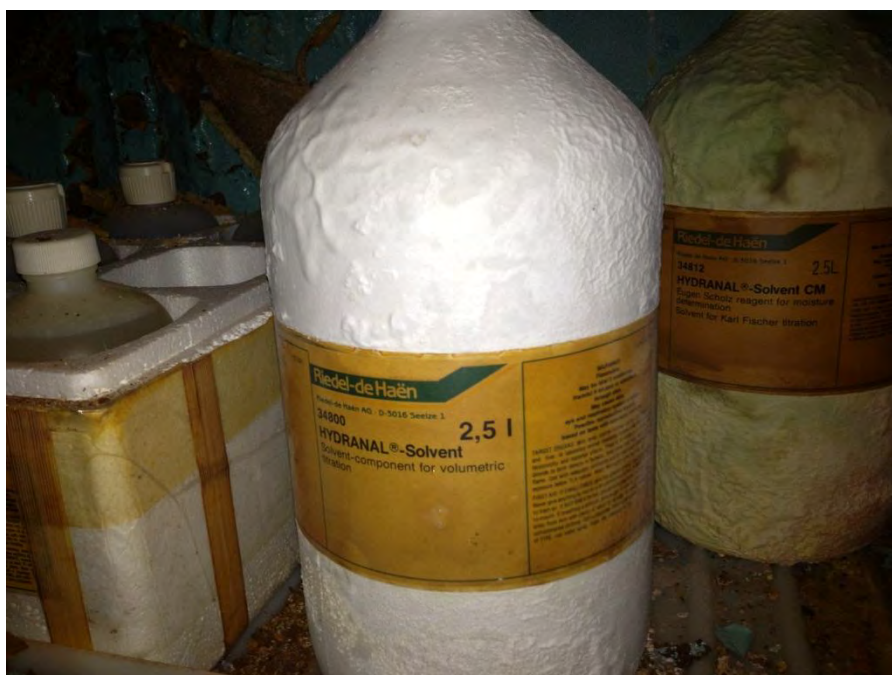


Photo Number:

17

Description:

Hydranal®
Solvent.

2nd Floor lab room
- Corrosive storage cabinet

There are no shipper markings on this container; therefore, it is **undetermined whether this material is related to Navy activities.**

**Photo Number:**

18

Description:

Table containing miscellaneous items including Methyl Alcohol and Sodium Carbonate.

2nd Floor lab room

There are no shipper markings on this container; therefore, it is **undetermined whether this material is related to Navy activities.**



Photo Number:

19

Description:

Table containing miscellaneous items including Nitric Acid and Sodium Carbonate.

2nd Floor lab room

There are no shipper markings on this container; therefore, it is **undetermined whether this material is related to Navy activities.**




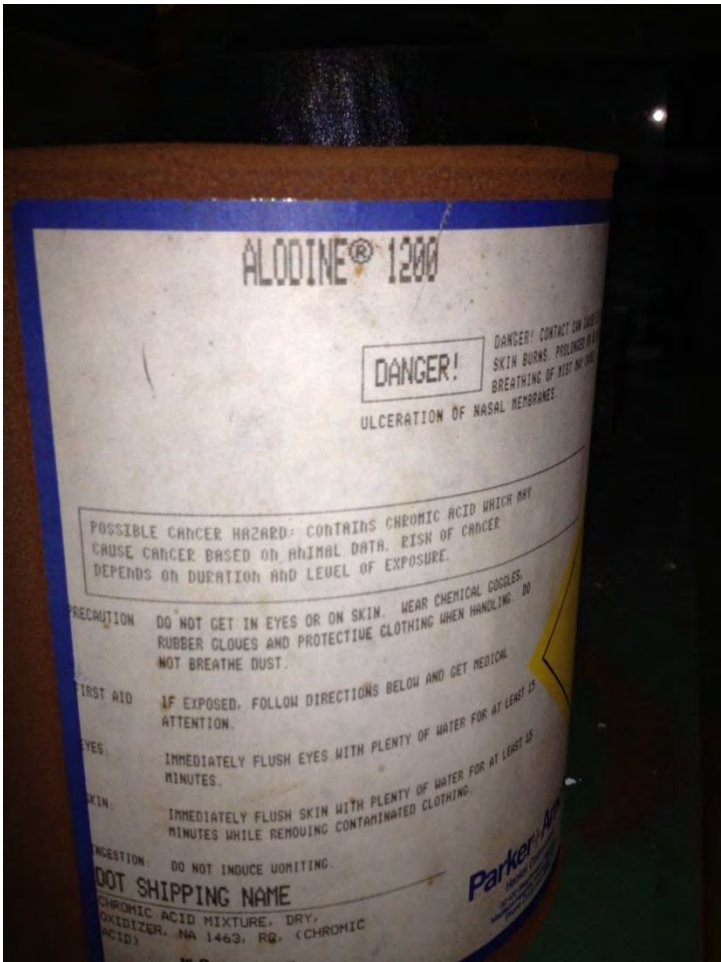
<p>Photo Number: 20</p> <p>Description: “Coulter Flushing Oil” Expiry: 31 March 2000 Produced Date: March 1995 2nd Floor lab room There are no shipper markings on this container; therefore, it is undetermined whether this material is related to Navy activities.</p>	
<p>Photo Number: 21</p> <p>Description: Alodine ® 1200 Label reads, “Danger!” Possible cancer hazard: contains Chromic Acid which may cause cancer based on animal data. Risk of cancer depends on duration and level of exposure.” 2nd Floor lab room There are no shipper markings on this container; therefore, it is undetermined whether this material is related to Navy activities.</p>	

Photo Number:

22

Description:

5 gallon bucket
labeled "Petroleum
Ether" (leaking).
Close up view of
label is provided in
Photo 23 (below).

2nd Floor Lab
room.

There are no
shipper markings
on this container;
therefore, it is
**undetermined
whether this
material is related
to Navy activities.**

**Photo Number:**

23

Description:

Close up view of
Petroleum Ether
bucket.

2nd Floor Lab
room.



Photo Number:

24

Description:

30 gallon drums labeled "Fyrquel 150" / "Phosphate Ester" / "Waste Oil".

Approximately 50 drums total. All drums appear to be empty.

Close up views are provided in Photos 25 and 26 (below).

2nd Floor Storage Room.

If all the drums are empty, **this would not be considered a waste material.**



Photo Number:

25

Description:

Empty 30 gallon drum labeled Phosphate Ester.

2nd Floor Storage Room.

If all the drums are empty, **this would not be considered a waste material.**



Photo Number:

26

Description:

30 gallon drums of
Fyrquel 150 /
Phosphate Ester /
Waste Oil.
Approximately 50.
Some may be
empty.

2nd Floor storage
room.

If all the drums are
empty, **this would
not be considered
a waste material.**



Photo Number:

27

Description:

Pallet of eight 5
gallon buckets of
Antifreeze /
Guildline / Acrylic
Lacquer Thinner /
Morlina Oil SD
150

4th Floor.

Photo provided by
Detyens personnel.
Resolution
Consultants was
not escorted to this
location, however,
based on the
observed
conditions of the
buckets and the
time of the Navy's
departure from the
building (~1995),
**this material does
not appear to be
related to Navy
activities.**




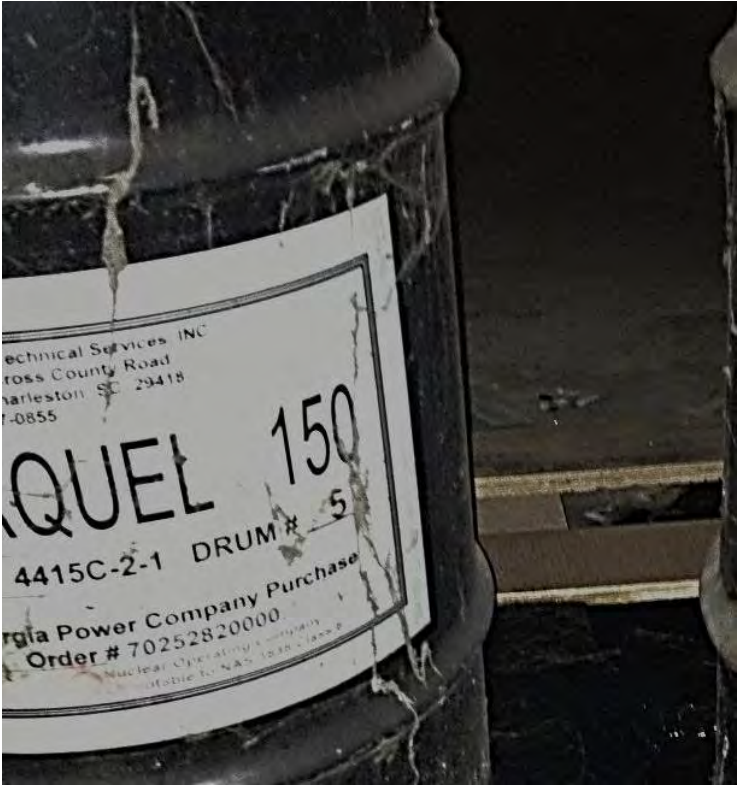
<p>Photo Number: 28</p> <p>Description: Two 30 gallon drums of Fyrquel 150 (leaking). 4th Floor. Photo provided by Detyens personnel. Resolution Consultants was not escorted to this location, however, based on the label shown in photo number 12 (below), this material does not appear to be related to Navy activities.</p>	 <p>A photograph showing two dark-colored 30-gallon drums sitting on a wooden pallet. The drum on the left has a white label with 'FYRQUEL 150' printed on it. The drums are in a dimly lit industrial setting.</p>
<p>Photo Number: 29</p> <p>Description: Label from leaking Fyrquel 150 drum. Label reads, "Applied Technical Services, Inc., Cross County Road, N. Charleston, SC 29418 29418 Fyrquel 150 Georgia Power Company Purchase 4th Floor Storage. This material does not appear to be related to Navy activities.</p>	 <p>A close-up photograph of a white label attached to a dark drum. The label contains the following text: 'Applied Technical Services, Inc.', 'Cross County Road', 'Charleston, SC 29418', '29418', 'FYRQUEL 150', '4415C-2-1 DRUM # 5', 'Georgia Power Company Purchase', and 'Order # 70252820000'. There is also some smaller, less legible text at the bottom of the label.</p>

Photo Number:

30

55 gallon drum of
ZEP.

2nd Floor storage
room.

Resolution
Consultants was
not escorted to this
location, however,
based on the
observed
conditions of the
drum in the photo
**this material does
not appear to be
related to Navy
activities.**

